

PERMIT NO. HI 0020630

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq.; the "Act") and Hawaii Revised Statutes, Chapter 342D, and Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55, Department of Health (DOH), State of Hawaii,

**UNIVERSITY OF HAWAII
WAIKIKI AQUARIUM**

(hereinafter "PERMITTEE"),

is authorized to discharge overflows from its Waikiki Aquarium saltwater exhibit tanks and pools, and treated seal pool drain down water, located at 2777 Kalakaua Avenue, Honolulu, Hawaii 96815,

to the receiving water named Mamala Bay, a portion of the Pacific Ocean through Outfall Serial No. 001 at coordinates: Latitude 21°16'17"N and Longitude 156°49'31"W,

in accordance with the effluent limitations, monitoring requirements and other conditions set forth herein, and in the attached DOH, "Standard NPDES Permit Conditions," dated December 30, 2005.

All references to Title 40 of the Code of Federal Regulations (40 CFR) are to regulations that are in effect on July 1, 2004, except as otherwise specified. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations in 40 CFR.

This permit will become effective on **(30 days after issuance date)**.

This permit and the authorization to discharge will expire at midnight
November 30, 2010.

Signed this ____ day of _____, 2006.

(For) Director of Health

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STANDARD NPDES PERMIT CONDITIONS (dated December 30, 2005)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date of this permit and lasting through November 30, 2010, the Permittee is authorized to discharge overflows from its Waikiki Aquarium saltwater exhibit tanks and pools, and treated seal pool drain down water through Outfall Serial No. 001. The discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Quarterly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report Only	Report Only	m ³ /sec (MGD)	Quarterly	Recorder/ Totalizer
Biochemical Oxygen Demand (5-day)	5.0 (27.0 ^a) 12.0 ^a	7.5 (40.0 ^a) 18.0 ^a	mg/l (lbs/day) kg/day	Quarterly	Composite
Suspended Solids	60.0 145.0 ^a (320.0 ^a)	90.0 218.0 ^a (480.0 ^a)	mg/l kg/day (lbs/day)	Quarterly	Composite
Enterococci ^b	7/100 ml	Report	#/100ml	Weekly	Grab
Total Residual Chlorine	N/A	0.10	mg/l	Quarterly	Grab
Total Nitrogen (as N)	3.51	Report	mg/l	Quarterly	Grab
Ammonia Nitrogen (as NH ₄ -N)	0.064	Report	mg/l	Quarterly	Grab
Nitrate+Nitrite Nitrogen [as (NO ₃ +NO ₂)-N]	0.111	Report	mg/l	Quarterly	Grab
Total Phosphorous (as P)	0.511	Report	mg/l	Quarterly	Grab
Chlorophyll <u>a</u>	0.005	Report	mg/l	Quarterly	Grab
Turbidity	6.4	Report	N.T.U.	Quarterly	Grab

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Parameter	Discharge Limitations			Monitoring Requirements	
	Quarterly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
pH	Not less than 6.0 nor greater than 9.0 standard units		Standard Units	Quarterly	Grab

^a Pollutant loads are based on an average flow of 0.028 m³/second, or 0.64 Million Gallon per Day (MGD)

^b The enterococci shall be reported in geometric mean.

2. Effluent samples shall be taken to coincide with the seal pool wash down, downstream of the facility where all the overflow waters collect prior to mixing with the receiving water.
3. Monitoring results shall be summarized on Discharge Monitoring Reports and submitted based on calendar quarters.
4. Samples and measurements taken for the purposes of monitoring shall be representative of the volume and nature of the total discharge.
5. There shall be no discharge of floating solids or visible foam.
6. There shall be no direct discharge of filter system backwash waters through the discharge outfall.

B. ZONE OF MIXING LIMITATIONS AND MONITORING REQUIREMENTS

1. The Zone of Mixing (ZOM) is established in the water area in Mamala Bay, a portion of the Pacific Ocean. The boundaries of the ZOM are beginning at a point on the seawall at the northwest corner of the lot Tax Map Key: 3-1-031:003 known as "The New Waikiki Aquarium Site" thence running by azimuths measured clockwise from true south:
 - a. 346°26' 169.40 feet along the seawall
 - b. 339°58' 37.00 feet along the seawall
 - c. 337°35' 105.70 feet along the seawall
 - d. 346°42' 36.00 feet along the seawall
 - e. 76°29' 245.60 feet along the north wall of the Natatorium
 - f. 31°42' 21.60 feet
 - g. 347°02' 150.00 feet along the west wall of the Natatorium
 - h. 77°18' 265.51 feet across the reef flat
 - i. 167°18' 515.19 feet across the reef flat
 - j. 257°18' 500.00 feet across the reef flat to the point of beginning and containing an area of 221,514.20 square feet.

A ZOM boundary map is shown in Part E of this permit.

2. A ZOM is granted only for the assimilation of overflows from Waikiki Aquarium saltwater exhibit tanks and pools, and treated seal pool drain down water at an average flow of 0.64 MGD.
3. The discharge from Outfall Serial No. 001 shall not cause any water quality standards set forth in HAR, Chapter 11-54, to be exceeded, including basic water quality criteria, except that the specific water quality criteria set forth in the table below may be exceeded within the ZOM.

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4. The Permittee shall monitor the ZOM and control stations as specified below. The discharges shall not exceed the limitations set forth in the table below at the boundary of the ZOM.

Parameter	Limitation	Unit	Type of Sample	Minimum Monitoring Frequency	
				ZOM Stations	Control Stations
Total Nitrogen (as N)	110.00	ug/L	Grab	Annually	Annually
Ammonia Nitrogen (as NH ₄ -N)	2.00	ug/L	Grab	Annually	Annually
Nitrate+Nitrite Nitrogen (as [NO ₃ +NO ₂]-N)	3.50	ug/L	Grab	Annually	Annually
Total Phosphorous (as P)	16.00	ug/L	Grab	Annually	Annually
Chlorophyll <u>a</u>	0.15	ug/L	Grab	Annually	Annually
Turbidity	0.20	NTU	Grab	Annually	Annually
Dissolved Oxygen	Not less than 75% saturation		Grab	Annually	Annually
pH	7.6 - 8.6 Standard Units		Grab	Annually	Annually
Salinity	Shall not vary more than 10% from natural or seasonal changes considering hydrological input or oceanographic factors.		Grab	Annually	Annually

5. Samples taken in compliance with the ZOM requirements shall be taken at the following locations:

- a. Control Station

Two (2) control stations shall be monitored. The control station shall be a point at least 100 feet away from the ZOM and selected sample station. The control stations shall be at the locations where impacts from the discharge would not be expected.

- b. ZOM Sample Station

Four (4) ZOM sample stations shall be monitored. Three (3) sample stations shall be monitored at the boundary of the ZOM and one (1) sample station shall be a point where the discharge initially mixes with the ocean water.

6. Samples taken in compliance with the ZOM requirements shall be taken on the same day as effluent monitoring samples are taken.

C. REPORTING REQUIREMENTS

1. Reporting of Monitoring Results

Monitoring results obtained during the previous calendar quarter shall be summarized and reported on a Discharge Monitoring Report Form (EPA No. 3320-1). The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this permit.

Monitoring reports shall be postmarked no later than the 28th day of the month following the completed reporting period. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the Director of Health (Director) at the following addresses:

Regional Administrator
U.S. Environmental Protection Agency, Region 9
Water Division
CWA Compliance Office (WTR-7)
75 Hawthorne Street
San Francisco, CA 94105

Director of Health
State of Hawaii
Department of Health
Environmental Management Division
Clean Water Branch
919 Ala Moana Boulevard, Room 301
Honolulu, Hawaii 96814-4920

2. Reporting of Noncompliance

The Permittee shall orally report any noncompliance which may endanger health or the environment within 24 hours of the incident or condition of noncompliance. Oral report shall be made by telephone to the CWB at 586-4309 during regular office hours or the Hawaii Start Hospital Operator at 247-2191 outside of regular office hours.

3. Types of Samples

- a. "Grab sample" means an individual sample collected at a randomly selected time over a period not exceeding 15 minutes.
- b. "Composite sample" means a combination of at least eight (8) sample aliquots, collected at periodic intervals during the operating hours of facility over a 24-hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.
- c. "Recorder/Totalizer" means a device that continuously sums or adds the flow in gallons or million gallons.

D. OTHER REQUIREMENTS

1. Schedule of Submission

The Permittee shall submit an Effluent and ZOM Monitoring Program which complies with Parts A. and B. of this permit to the Director for approval within 30 days from the issuance date of this permit.

The Program(s) shall include at a minimum, but not be limited to the following:

- a. Sampling station location map;
- b. Sample holding time;
- c. Preservation techniques;
- d. Test method and method detection limit; and
- e. Quality assurance and quality control measures;

The DOH reserves the right to require the permittee to revise the approved program(s), as appropriate, pursuant toward compliance with the terms and conditions of this permit.

The Permittee shall use the test methods promulgated in 40 CFR Part 136 effective on July 1, 1998, and, when applicable, the chemical methodology for sea water analyses (see HAR, Chapter 11-54-10). The detection limits of the test methods used shall be equal to or lower than the permit limitation. For situations where the applicable water quality standard is below the detection limits of the available test methods, the test method which has the detection limit closest to the applicable water quality standards shall be used. If a test method has not been promulgated for a particular constituent, the Permittee may use any suitable alternative method for measuring the level of the constituent in the discharge provided the Permittee submit a description of the method or a reference to a published method for approval by the director in accordance with 40 CFR Part 136.4.

2. Schedule of Maintenance

The Permittee shall submit a schedule for approval by the Director of Health at least 14 days prior to any maintenance of facilities which might result in exceeding of effluent limitations. The schedule shall contain a description of the maintenance and its purpose; the period of maintenance, including exact dates and times; and steps taken or planned to reduce, eliminate, and prevent occurrence of noncompliance.

E. MAPS

1. Facility Map (See Attachment 1)
2. ZOM Boundary Map (See Attachment 2)

Attachment 1 - Facility Map



